

**TABLE 2-14**  
**Occurrence, Distribution, and Selection of Chemicals of Potential Concern**

Scenario Timeframe: Current/Future
Exposure Medium: Surface Water
Exposure Scenario: Direct contact with divers

Exposure Point	Chemical <sup>a</sup>	Notes	Units	Minimum Detected Concentration	Maximum Detected Concentration	Location of Maximum Concentration	Date of Maximum Concentration	Detection Frequency	Range of Detection Limits <sup>b</sup>	Concentration Used for Screening	Screening Toxicity Value	COPC Flag (Y/N)	Rationale for Selection or Deletion
Study Area Wide	<b>Metals</b>												
	Aluminum		ug/l	1.5E+00	1.9E+03	W023	Jan-06	84%	9.0E-01 - 5.0E+00	3.7E+03	nc	N	Maximum detected value does not exceed screening value.
	Antimony		ug/l	1.5E-02	1.3E-01	W001	Jul-05	50%	2.0E-02 - 7.0E-02	1.5E+00	nc	N	Maximum detected value does not exceed screening value.
	Arsenic		ug/l	2.0E-01	7.5E-01	W001	Jul-05	91%	3.8E-01 - 5.1E-01	4.5E-02	ca	Y	Maximum detected value exceeds screening value.
	Cadmium		ug/l	8.0E-03	5.0E-02	W004, W015, W022	Mar-05, Nov-04, Dec-04	24%	2.0E-03 - 7.0E-02	1.8E+00	nc	N	Maximum detected value does not exceed screening value.
	Chromium	d	ug/l	1.0E-01	1.7E+00	W036	Jan-07	55%	1.1E-01 - 5.7E-01	1.1E+01	nc	N	Maximum detected value does not exceed screening value.
	Chromium hexavalent		ug/l	5.0E-01	9.0E-01	W011	Nov-06	23%	6.0E-01 - 2.0E+01	1.1E+01	nc	N	Maximum detected value does not exceed screening value.
	Copper		ug/l	3.7E-01	3.7E+00	W023	Jan-06	99%	4.4E-01 - 5.4E-01	1.5E-02	nc	N	Maximum detected value does not exceed screening value.
	Lead	e	ug/l	8.0E-03	1.8E+00	W008	Jul-05	86%	8.0E-03 - 5.1E-02	1.5E+01	NA	N	Maximum detected value does not exceed screening value.
	Mercury		ug/l	1.3E-02	2.5E-02	W031	Nov-06	3%	2.0E-02 - 8.0E-02	5.7E-02	nc	N	Maximum detected value does not exceed screening value.
	Nickel		ug/l	1.5E-01	1.9E+00	W033	Jan-07	86%	2.0E-01 - 9.9E-01	7.3E+01	nc	N	Maximum detected value does not exceed screening value.
	Selenium		ug/l	1.0E-01	1.0E+00	W002	Mar-05	58%	1.0E-01 - 6.0E-01	1.8E+01	nc	N	Maximum detected value does not exceed screening value.
	Silver		ug/l	6.8E-03	6.1E-02	W002	Jul-05	2%	3.0E-03 - 5.2E-02	1.8E+01	nc	N	Maximum detected value does not exceed screening value.
	Thallium		ug/l	4.0E-03	3.2E-02	W015	Nov-04	16%	4.0E-03 - 4.0E-03	2.4E-01	nc	N	Maximum detected value does not exceed screening value.
	Zinc		ug/l	9.0E-01	5.8E+01	W022	Dec-04	74%	6.0E-01 - 6.0E+00	1.1E+03	nc	N	Maximum detected value does not exceed screening value.
	<b>Butyltins</b>												
	Butyltin ion	f	ug/l	1.5E-03	3.0E-02	W023	Jan-07	11%	1.7E-03 - 4.0E-02	1.1E+00	nc	N	Maximum detected value does not exceed screening value.
	Dibutyltin ion	f	ug/l	6.1E-04	7.3E-03	W009	Dec-04	14%	5.5E-04 - 2.5E-02	1.1E+00	nc	N	Maximum detected value does not exceed screening value.
	Tributyltin ion	f	ug/l	6.5E-04	2.8E-03	W035	Jan-07	9%	6.0E-04 - 1.4E-02	1.1E+00	nc	N	Maximum detected value does not exceed screening value.
	<b>Polynuclear Aromatic Hydrocarbons</b>												
	2-Methylnaphthalene		ug/l	1.2E-03	3.2E-01	W031	Jan-07	30%	2.7E-03 - 3.4E-02	1.5E+01	nc	N	Maximum detected value does not exceed screening value.
	Acenaphthene		ug/l	2.1E-04	2.1E-01	W012	Jul-05	34%	2.0E-03 - 1.6E-02	2.2E+02	nc	N	Maximum detected value does not exceed screening value.
	Acenaphthylene	g	ug/l	2.8E-04	4.3E-02	W012	Jul-05	32%	2.1E-04 - 2.7E-02	2.2E+02	nc	N	Maximum detected value does not exceed screening value.
	Anthracene		ug/l	2.9E-04	2.4E-01	W031	Jan-07	22%	1.6E-04 - 1.5E-02	1.1E+03	nc	N	Maximum detected value does not exceed screening value.
	Benzo(a)anthracene		ug/l	5.2E-05	1.4E-01	W031	Jan-07	38%	3.4E-04 - 8.4E-03	2.9E-02	ca	Y	Maximum detected value exceeds screening value.
	Benzo(a)pyrene		ug/l	1.8E-05	1.5E-01	W012	Jul-05	33%	6.1E-04 - 8.6E-03	2.9E-03	ca	Y	Maximum detected value exceeds screening value.
	Benzo(b)fluoranthene		ug/l	2.4E-05	1.1E-01	W012	Jul-05	34%	2.0E-03 - 9.2E-03	2.9E-02	ca	Y	Maximum detected value exceeds screening value.
	Benzo(g,h,i)perylene	h	ug/l	7.5E-05	1.4E-01	W012	Jul-05	30%	3.3E-04 - 1.5E-02	1.1E+02	nc	N	Maximum detected value does not exceed screening value.
	Benzo(k)fluoranthene		ug/l	1.6E-05	1.0E-01	W012	Jul-05	35%	1.4E-03 - 1.1E-02	2.9E-01	ca	N	Maximum detected value does not exceed screening value.
	Chrysene		ug/l	9.5E-05	1.9E-01	W012	Jul-05	47%	1.3E-03 - 1.1E-02	2.9E+00	ca	N	Maximum detected value does not exceed screening value.
	Dibenzo(a,h)anthracene		ug/l	2.6E-05	1.4E-02	W031	Jan-07	16%	4.3E-05 - 7.2E-03	2.9E-03	ca	Y	Maximum detected value exceeds screening value.
	Fluoranthene		ug/l	5.1E-04	4.1E-01	W031	Jan-07	59%	2.4E-03 - 1.9E-02	1.5E+02	nc	N	Maximum detected value does not exceed screening value.
	Fluorene		ug/l	3.7E-04	1.6E-01	W031	Jan-07	34%	2.6E-03 - 1.1E-02	1.5E+02	nc	N	Maximum detected value does not exceed screening value.
	Indeno(1,2,3-cd)pyrene		ug/l	1.6E-04	1.1E-01	W012	Jul-05	30%	1.5E-04 - 8.4E-03	2.9E-02	ca	Y	Maximum detected value exceeds screening value.
	Naphthalene		ug/l	7.4E-04	7.7E-01	W012	Dec-04	14%	3.2E-03 - 9.9E-02	1.4E-01	ca	Y	Maximum detected value exceeds screening value.
	Phenanthrene	h	ug/l	7.9E-04	1.1E+00	W031	Jan-07	32%	2.2E-03 - 1.7E-02	1.1E+02	nc	N	Maximum detected value does not exceed screening value.
	Pyrene		ug/l	4.3E-04	6.5E-01	W031	Jan-07	62%	1.5E-03 - 2.8E-02	1.1E+02	nc	N	Maximum detected value does not exceed screening value.
	<b>Phthalates</b>												
	Bis(2-ethylhexyl) phthalate		ug/l	7.8E-03	3.6E+00	W005	Nov-06	15%	4.3E-03 - 4.1E+00	4.8E+00	ca	N	Maximum detected value does not exceed screening value.
	Butylbenzyl phthalate		ug/l	8.9E-04	1.2E-01	W025	Sep-06	20%	5.1E-04 - 7.3E-02	3.5E+01	ca	N	Maximum detected value does not exceed screening value.
	Dibutyl phthalate		ug/l	1.5E-03	1.5E-01	W029	Jan-07	6%	9.8E-04 - 3.0E-01	3.7E+02	nc	N	Maximum detected value does not exceed screening value.
	Diethyl phthalate		ug/l	1.2E-03	1.7E-01	W005	Nov-06	15%	6.7E-04 - 1.4E-01	2.9E-03	nc	N	Maximum detected value does not exceed screening value.
	Dimethyl phthalate	i	ug/l	4.8E-03	4.8E-03	W015	Nov-04	1%	2.6E-04 - 1.5E-02	3.7E-04	nc	N	Maximum detected value does not exceed screening value.
	Di-n-octyl phthalate	j	ug/l	1.4E-04	1.7E-02	W034	Jan-07	2%	1.1E-04 - 3.6E-02	2.9E+03	nc	N	Maximum detected value does not exceed screening value.
	<b>Phenols</b>												
	4-Chloro-3-methylphenol	k	ug/l	2.3E-02	6.5E-01	W003	Mar-05	8%	2.9E-02 - 6.8E-01	1.8E+01	nc	N	Maximum detected value does not exceed screening value.
	Phenol		ug/l	1.6E-02	2.0E-01	W033	Jan-07	9%	2.0E-02 - 3.3E-01	1.1E+03	nc	N	Maximum detected value does not exceed screening value.
	<b>Polychlorinated Biphenyls</b>												
	Total PCB Congeners	l	pg/l	1.1E+02	1.2E+04	W013-1	Mar-05	100%	NA - NA	3.4E+04	ca	N	Maximum detected value does not exceed screening value.
	<b>Dioxin/Furan</b>												
	Total Dioxin/Furan TEQ	m	pg/l	3.1E-02	5.0E-01	W015	Nov-04	100%	NA - NA	5.2E-01	ca	N	Maximum detected value does not exceed screening value.
	Total PCB TEQ	m	pg/l	1.6E-03	8.5E-02	W005	Sep-06	100%	NA - NA	5.2E-01	ca	N	Maximum detected value does not exceed screening value.
	<b>Pesticides</b>												
	Aldrin		ug/l	3.0E-07	4.1E-03	W030	Jan-07	41%	3.4E-07 - 1.8E-03	4.0E-03	ca	Y	Maximum detected value exceeds screening value.

**DO NOT QUOTE OR CITE**

This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

</

**TABLE 2-14**  
**Occurrence, Distribution, and Selection of Chemicals of Potential Concern**

Scenario Timeframe: Current/Future
Exposure Medium: Surface Water
Exposure Scenario: Direct contact with divers

Exposure Point	Chemical <sup>a</sup>	Notes	Units	Minimum Detected Concentration	Maximum Detected Concentration	Location of Maximum Concentration	Date of Maximum Concentration	Detection Frequency	Range of Detection Limits <sup>b</sup>	Concentration Used for Screening <sup>c</sup>	Screening Toxicity Value	COPC Flag (Y/N)	Rationale for Selection or Deletion
	alpha-Hexachlorocyclohexane		ug/l	3.8E-06	2.0E-04	W026	Nov-06	47%	6.0E-05 - 5.4E-04	1.1E-02	ca	N	Maximum detected value does not exceed screening value.
	beta-Hexachlorocyclohexane		ug/l	1.7E-06	3.6E-04	W026	Jan-07	37%	3.5E-06 - 1.9E-03	3.7E-02	ca	N	Maximum detected value does not exceed screening value.
	delta-Hexachlorocyclohexane	n	ug/l	6.3E-07	1.7E-03	W013-1	Nov-04	22%	4.2E-07 - 9.8E-04	NA	NA	Y	Analyte detected and no screening value or surrogate exists.
	Dieldrin		ug/l	1.7E-05	7.0E-04	W028, W036	Jan-07, Jan-07	46%	4.0E-04 - 5.4E-04	4.2E-03	ca	N	Maximum detected value does not exceed screening value.
	Endrin		ug/l	1.7E-07	1.7E-04	W038	Nov-06	14%	4.6E-07 - 7.4E-04	1.1E+00	nc	N	Maximum detected value does not exceed screening value.
	Endrin aldehyde	o	ug/l	2.1E-04	9.1E-04	W036	Jan-07	4%	1.4E-07 - 5.4E-04	1.1E+00	nc	N	Maximum detected value does not exceed screening value.
	Endrin ketone	o	ug/l	3.4E-07	2.0E-04	W036	Nov-06	30%	4.0E-07 - 5.4E-04	1.1E+00	nc	N	Maximum detected value does not exceed screening value.
	gamma-Hexachlorocyclohexane		ug/l	7.2E-06	1.1E-03	W026	Jan-07	49%	1.2E-04 - 5.6E-04	6.1E-02	ca	N	Maximum detected value does not exceed screening value.
	Heptachlor		ug/l	1.3E-07	1.6E-03	W030	Jan-07	15%	6.9E-08 - 2.2E-03	1.5E-02	ca	N	Maximum detected value does not exceed screening value.
	Heptachlor epoxide		ug/l	2.1E-06	7.1E-05	W037	Jan-07	42%	6.8E-06 - 5.4E-04	7.4E-03	ca	N	Maximum detected value does not exceed screening value.
	Methoxychlor		ug/l	9.2E-07	1.1E-02	W013-2	Nov-04	27%	1.3E-06 - 1.6E-03	1.8E+01	nc	N	Maximum detected value does not exceed screening value.
	Total Chlordanes	p	ug/l	1.4E-05	2.9E-03	W002	Jul-05	47%	4.7E-04 - 1.9E-03	1.9E-01	ca	N	Maximum detected value does not exceed screening value.
	Total DDD	q	ug/l	1.5E-05	5.2E-03	W015	Nov-04	47%	4.7E-04 - 1.4E-03	2.8E-01	ca	N	Maximum detected value does not exceed screening value.
	Total DDE	r	ug/l	1.7E-05	7.5E-04	W016-1	Jul-05	49%	2.6E-04 - 7.8E-04	2.0E-01	ca	N	Maximum detected value does not exceed screening value.
	Total DDT	s	ug/l	1.6E-06	1.9E-02	W001	Mar-05	53%	4.1E-04 - 1.1E-03	2.0E-01	ca	N	Maximum detected value does not exceed screening value.
	Total Endosulfan		ug/l	1.5E-05	1.2E-03	W013-1	Nov-04	50%	3.1E-04 - 5.4E-04	2.2E+01	nc	N	Maximum detected value does not exceed screening value.
	<b>SVOCs</b>												
	1,4-Dichlorobenzene		ug/l	1.9E-02	1.9E-02	W022	Dec-04	1%	1.4E-02 - 1.5E-02	4.3E-01	ca	N	Maximum detected value does not exceed screening value.
	4-Chloroaniline		ug/l	1.3E-02	1.3E-02	W023	Jan-07	1%	1.8E-02 - 2.0E-02	3.4E-01	ca	N	Maximum detected value does not exceed screening value.
	Aniline		ug/l	1.2E+00	1.2E+00	W035	Jan-07	1%	2.5E-01 - 1.2E+00	1.2E+01	ca	N	Maximum detected value does not exceed screening value.
	Benzoic acid		ug/l	1.2E+00	2.2E+00	W017, W018	Dec-04, Nov-04	9%	1.8E+00 - 2.1E+00	1.5E+04	nc	N	Maximum detected value does not exceed screening value.
	Carbazole	t	ug/l	2.4E-02	8.3E-02	W031	Jan-07	4%	1.3E-02 - 1.5E-02	1.5E-02	nc	N	Maximum detected value does not exceed screening value.
	Dibenzofuran	t	ug/l	2.5E-02	2.5E-02	W031	Jan-07	1%	5.7E-03 - 2.9E-02	1.5E+02	nc	N	Maximum detected value does not exceed screening value.
	Hexachlorobenzene		ug/l	1.3E-05	7.0E-03	W022	Mar-05	37%	3.1E-04 - 1.6E-02	4.2E-02	ca	N	Maximum detected value does not exceed screening value.
	Hexachlorobutadiene		ug/l	1.1E-07	2.6E-03	W017	Dec-04	23%	2.3E-07 - 2.2E-02	8.6E-01	ca	N	Maximum detected value does not exceed screening value.
	Isophorone		ug/l	7.1E-03	1.8E-02	W017	Dec-04	4%	8.5E-03 - 9.5E-03	7.1E+01	ca	N	Maximum detected value does not exceed screening value.
	<b>Herbicides</b>												
	2,4-D		ug/l	4.7E-02	1.6E-01	W035	Jan-07	4%	3.4E-02 - 2.1E-01	3.7E+01	nc	N	Maximum detected value does not exceed screening value.
	2,4-DB		ug/l	1.4E-01	2.1E-01	W025	Sep-06	2%	4.0E-02 - 4.1E-01	2.9E+01	nc	N	Maximum detected value does not exceed screening value.
	Dalapon		ug/l	2.3E-01	2.6E-01	W036	Jan-07	2%	1.8E-01 - 6.7E-01	1.1E+02	nc	N	Maximum detected value does not exceed screening value.
	MCPP		ug/l	5.2E+00	1.9E+01	W035	Jan-07	4%	6.0E+00 - 1.2E+02	3.7E+00	nc	Y	Maximum detected value exceeds screening value.
	<b>Conventional</b>												
	Perchlorate		ug/l	3.0E-01	1.6E+01	W016-2	Nov-04	50%	2.0E-01 - 1.0E+00	2.6E+00	nc	Y	Maximum detected value exceeds screening value.

**Notes:** a Chemical list includes analytes detected in surface water samples determined to represent human health exposure to a diver from direct contact. Integrated samples have been averaged prior to screening. Benzo(j+k)fluoranthene is assumed to be entirely benzo(k)fluoranthene.

b For chemical mixtures, the range of detection limits listed is the maximum and minimum detection limit for individual isomers or congeners within the mixture.

c Screening concentrations and toxicity classifications are from EPA RSLs for tapwater (April 2009) or EPA Region 6 SLs for tapwater (8 March 2008). SLs for noncarcinogenic chemicals are divided by 10.

d EPA RSL for Cr VI used for chromium screening concentration.

e EPA RSL for tapwater used for lead. RSL not divided by 10 for screening.

f EPA RSL for tributyltin oxide (TBTO) used as surrogate.

g EPA RSL for acenaphthene used as surrogate.

h EPA RSL for pyrene used as surrogate.

i EPA Region 6 SL for tapwater used for Dimethyl phthalate.

j EPA RSL for diethyl phthalate used as surrogate.

k EPA RSL for 2-Chlorophenol used as surrogate.

l EPA RSL for PCBs as Aroclor 1254 used for screening concentration.

m EPA RSL for 2,3,7,8-TCDD (Dioxin) used for screening concentration.

n A screening value was not available and a surrogate chemical could not be identified. Analyte is discussed qualitatively in text.

o EPA RSL for endrin used as surrogate.

p EPA RSL for technical chlordane used for total chlordane.

q EPA RSL for DDD used for total DDD.

r EPA RSL for DDE used for total DDE.

s EPA RSL for DDT used for total DDT.

#### DO NOT QUOTE OR CITE

This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

**TABLE 2-14**  
**Occurrence, Distribution, and Selection of Chemicals of Potential Concern**

Scenario Timeframe: Current/Future
Exposure Medium: Surface Water
Exposure Scenario: Direct contact with divers

Exposure Point	Chemical <sup>a</sup>	Notes	Units	Minimum Detected Concentration	Maximum Detected Concentration	Location of Maximum Concentration	Date of Maximum Concentration	Detection Frequency	Range of Detection Limits <sup>b</sup>	Concentration Used for Screening	Screening Toxicity Value	COPC Flag (Y/N)	Rationale for Selection or Deletion
----------------	-----------------------	-------	-------	--------------------------------	--------------------------------	-----------------------------------	-------------------------------	---------------------	--	----------------------------------	--------------------------	-----------------	-------------------------------------

<sup>a</sup> EPA RSL for fluorene used as surrogate.

<sup>b</sup> EPA Region 6 SL for tapwater used for Dibenzofuran.

**Abbreviations:** ca = Carcinogen.  
COPC = Chemical of potential concern.  
EPA = U.S. Environmental Protection Agency.  
N = No.  
NA = Not applicable. Chemical detected at 100% frequency, or screening value does not exist for given chemical.  
nc = Noncarcinogen.  
pg/l = Picograms per liter.  
RSL = Regional screening level.  
TEQ = Toxicity equivalent.  
ug/l = Micrograms per liter.  
Y = Yes.

**DO NOT QUOTE OR CITE**

This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.